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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 21, 2000

TO: Internal File

THRU: Dave Darby, Team Lead 

FROM: Wayne H. Western, Senior Reclamation Specialist *WHW*

RE: Pines Tract Lease, Canyon Fuel Company, LLC, SUFCO Mine ACT/041/002-SR99D

SUMMARY:

On January 19, 2000 the Division modified the subsidence section of the Pines Tract technical assessment. The two changes to the plan are the Permittee must show how they will protect The Grotto and the East Fork of the East Fork of Box Canyon from subsidence damage.

TECHNICAL ANALYSIS:

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR Sec. 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Renewable resources survey

The Permittee identified the renewable resources on Plate 4-1 and is at a scale of 1" = 2,000' (1 to 24,000). R645-301-525.110 requires the map of the renewable resources be at a scale of 1 to 12,000 or larger (1" = 1,000').

Subsidence control plan

1. The Permittee proposes to use longwall and room-and-pillar mining methods to extract the coal. Those methods are currently used to extract the coal. The Permittee shows the mine layout on Plate 5-2C.

2. Plate 5-2C shows the underground working. The Permittee does not specifically show on that plate what methods will be used to prevent subsidence. The Permittee needs to show the subsidence control methods on the plate, for example the area where first mining will only occur.
3. The description of the physical condition that could affect subsidence will be reviewed by the Division's geologist.
4. The general subsidence control plan in the MRP was determined adequate for the existing permit. The proposed changes to the plan are shown on Plate 5-10. On that plate the Permittee shows the areas that will be protected from subsidence and the limits of surface disturbance.

Table 5-2 lists the subsidence control points. The list was last updated in January 1999. The Permittee needs to list the location of the new subsidence control points that will be used to monitor the Pines Tract.

5. Two items in the Pines Tract lease must be protected from subsidence. The first is The Grotto, an archeologic site, and the second is a perennial stream, the East Fork of the East Fork of Box Canyon. The Grotto consists of a 50-foot cliff with a perennial pond at the bottom, a rock shelter and artifacts.

The effects of subsidence vary with local conditions. Before the Permittee mines near The Grotto he must show that site will be protected from subsidence. The Division needs the Permittee to calculate the local angle-of-draw for the area around The Grotto and use mining methods that will protect The Grotto from any subsidence affects.

The East Fork of the East Fork of Box Canyon is a perennial stream that needs to be protected from subsidence. The Division is concerned that subsidence could create or open cracks that would capture the stream. The Permittee must adopt mining methods that will prevent damage to the East Fork of the East Fork of Box Canyon. Methods used to prevent subsidence damage may include first mining only or leaving barrier pillars.

6. The Permittee states in the MRP that no subsidence damage should occur. If damage occurred, they would mitigate the damage. The Permittee has caused some damage to stock watering ponds and has repaired the damage. The Division anticipates that subsidence damage would be limited to surface cracks.
7. The Permittee committed to repair any subsidence damage that should occur.
8. No significant surface resources are in the area that needs protection.

Performance standards for subsidence control

The Permittee committed to meet all subsidence performance standards.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-525.110, The Permittee must give the Division a map of the permit and adjacent areas at a scale of 1:12,000, (1" = 1,000') or larger, showing the location and type of structures and renewable resource lands that subsidence may materially damage or for which the value or foreseeable use may be diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence. The maps in the amendment are at a scale of 1:24,000 or 1" = 2,000'.

R645-301-525.410, The Permittee must show the timing and sequence of mining operations for the Pines Tract on Plate 5-2C or an equivalent mine map.

R645-301-525.420, The Permittee must show on Plate 5-2C or an equivalent map the methods that will be used to prevent subsidence (first mining or access only for example).

R645-301-525.440, the Permittee must list the location of the new monitoring points that will be associated with the Pines Tract on Table 5-2.

STIPULATIONS:

Before the permit being issued the Permittee must agree to the following stipulations.

R645-301-525.490, The Permittee must calculate the local angle-of-draw for the area near The Grotto. If the Grotto is within the local angle-of-draw, the Permittee must adopt mining methods that will protect the structure from subsidence.

R645-301-525.214 and R645-301-525.400, The Permittee must develop a subsidence control plan that will protect the East Fork of the East Fork of Box Canyon from subsidence damage.

RECOMMENDATIONS:

Before the significant revision is approved, the Permittee must correct all the deficiencies and agree to the above-mentioned stipulations.

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